

## WEST Search History

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DATE: Tuesday, July 12, 2005

<b>Hide?</b>	<b><u>Set Name</u></b>	<b><u>Query</u></b>	<b><u>Hit Count</u></b>
		<i>DB=USPT,EPAB,JPAB,DWPI; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L3	epoxygenase and plant	27
<input type="checkbox"/>	L2	epoxy adj 9 adj octadecenoic adj acid	4
<input type="checkbox"/>	L1	12 adj 13 adj epoxy adj 9 adj octadecenoic adj acid	0

END OF SEARCH HISTORY

? b 5,10

12jul05 12:09:46 User208737 Session D556.1  
\$0.38 0.109 DialUnits File1  
\$0.38 Estimated cost File1  
\$0.22 TELNET  
\$0.60 Estimated cost this search  
\$0.60 Estimated total session cost 0.109 DialUnits

SYSTEM:OS - DIALOG OneSearch

File 5:Biosis Previews(R) 1969-2005/Jul W1  
(c) 2005 BIOSIS

File 10:AGRICOLA 70-2005/Jul  
(c) format only 2005 The Dialog Corporation

Set	Items	Description
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? s epoxy and octadecenoic and acid		
	9483	EPOXY
	0	OCTADECCENOIC
	1362472	ACID
S1	0	EPOXY AND OCTADECCENOIC AND ACID
? s epoxy and octadecenoic		
	9483	EPOXY
	944	OCTADECCENOIC
S2	109	EPOXY AND OCTADECCENOIC
? s s2 and plant		
	109	S2
	1683619	PLANT
S3	22	S2 AND PLANT
? t 3/6/1-22		

3/6/1 (Item 1 from file: 5)  
0013026815 BIOSIS NO.: 200100198654  
**Inhibition of polyunsaturated fatty acid accumulation in plants expressing  
a fatty acid epoxigenase**  
2000

3/6/2 (Item 2 from file: 5)  
0012578961 BIOSIS NO.: 200000297274  
**New cyclopentenone fatty acids formed from linoleic and linolenic acids in  
potato**  
2000

3/6/3 (Item 3 from file: 5)  
0011482706 BIOSIS NO.: 199800276953  
**Identification of non-heme diiron proteins that catalyze triple bond and  
epoxy group formation**  
1998

3/6/4 (Item 4 from file: 5)  
0010314212 BIOSIS NO.: 199698782045  
**Peroxygenase-catalyzed fatty acid epoxidation in cereal seeds: Sequential  
oxidation of linoleic acid into 9(S),12(S),13(S)-trihydroxy-10(E) -**

octadecenoic acid  
1996

3/6/5 (Item 5 from file: 5)  
0009962286 BIOSIS NO.: 199598430119  
Fatty acid selectivity of a lipase purified from Vernonia galamensis seed  
1995

3/6/6 (Item 6 from file: 5)  
0008857017 BIOSIS NO.: 199396021433  
High-performance liquid chromatography of the triacylglycerols of Vernonia  
galamensis and Crepis alpina seed oils  
1993

3/6/7 (Item 7 from file: 5)  
0008787908 BIOSIS NO.: 199395090174  
Enzymatic synthesis and spectroscopic characterization of  
1,3-divernoloylglycerol from Vernonia galamensis seed oil  
1993

3/6/8 (Item 8 from file: 5)  
0007769977 BIOSIS NO.: 199192015748  
PREPARATION OF DEUTERIUM-LABELLED METHYL LINOLEATE AND ITS GEOMETRIC  
ISOMERS FROM NATURAL SEED OILS  
1991

3/6/9 (Item 9 from file: 5)  
0007665968 BIOSIS NO.: 199191048859  
VERNONIA-GALAMENSIS A RICH SOURCE OF EPOXY ACID  
1990

3/6/10 (Item 10 from file: 5)  
0007663295 BIOSIS NO.: 199191046186  
MINOR COMPONENTS OF LESQUERELLA-FENDLERI SEED OIL  
1990

3/6/11 (Item 11 from file: 5)  
0007307083 BIOSIS NO.: 199090091562  
PILOT PLANT EXTRACTION OF OIL FROM VERNONIA-GALAMENSIS SEED  
1990

3/6/12 (Item 12 from file: 5)  
0007169146 BIOSIS NO.: 199089087037  
ALLENE OXIDE CYCLASE A NEW ENZYME IN PLANT LIPID METABOLISM  
1990

3/6/13 (Item 13 from file: 5)  
0006191624 BIOSIS NO.: 198886031545  
DEVELOPMENT OF PLANT CUTICLES FINE STRUCTURE AND CUTIN COMPOSITION OF

CLIVIA-MINIATRA REG. LEAVES  
1988

3/6/14 (Item 1 from file: 10)  
4190425 20608874 Holding Library: AGL  
Purification and characterization of allene oxide cyclase from dry corn seeds  
1997  
URL: <http://www.plantphysiol.org/>

3/6/15 (Item 2 from file: 10)  
4060008 23325154 Holding Library: AGL  
A germination-specific epoxide hydrolase from *Euphorbia lagascae*  
2003

3/6/16 (Item 3 from file: 10)  
3923924 23216261 Holding Library: AGL  
Transgenic expression of a delta12-epoxygenase gene in *Arabidopsis* seeds inhibits accumulation of linoleic acid  
2001

3/6/17 (Item 4 from file: 10)  
3572480 20562437 Holding Library: AGL  
Fatty acid selectivity of a lipase purified from *Vernonia galamensis* seed  
1995

3/6/18 (Item 5 from file: 10)  
3558937 20551335 Holding Library: AGL  
Specificity of *Carica papaya* latex as biocatalyst in the esterification of fatty acids with 1-butanol  
1996 Jul

3/6/19 (Item 6 from file: 10)  
3541587 20537520 Holding Library: AGL  
Peroxygenase-catalyzed fatty acid epoxidation in cereal seeds. Sequential oxidation of linoleic acid into 9(S),12(S),13(S)-trihydroxy-10(E)-octadecenoic acid  
1996 Mar

3/6/20 (Item 7 from file: 10)  
3366390 20392011 Holding Library: AGL  
Regio- and stereoselectivity of cytochrome P-450 and peroxygenase-dependent formation of cis-12,13- epoxy -9(Z)- octadecenoic acid (vernolic acid) in *Euphorbia lagascae*  
1993 Dec15

3/6/21 (Item 8 from file: 10)  
3269813 93018157 Holding Library: AGL  
On the specificity of a fatty acid epoxygenase in broad bean (*Vicia faba*

L.)

1992 Jul

3/6/22 (Item 9 from file: 10)

3060981 91010622 Holding Library: AGL

**Hydroperoxide-dependent epoxidation of unsaturated fatty acids in the broad bean (*Vicia faba* L.)**

1990 Dec

? t 3/5/17-22

3/5/17 (Item 4 from file: 10)

DIALOG(R)File 10:AGRICOLA

(c) format only 2005 The Dialog Corporation. All rts. reserv.

3572480 20562437 Holding Library: AGL

**Fatty acid selectivity of a lipase purified from *Vernonia galamensis* seed**

Ncube, I. Gitlesen, T.; Adlercreutz, P.; Read, J.S.; Mattiasson, B.  
Lund University, Lund, Sweden.

Amsterdam : Elsevier Science B.V.

Biochimica et biophysica acta = International journal of biochemistry and biophysics. July 13, 1995. v. 1257 (2) p. 149-156.

ISSN: 0006-3002 CODEN: BBACAQ

DNAL CALL NO: 381 B522

Language: English

Includes references

Place of Publication: Netherlands

Subfile: IND; OTHER FOREIGN;

Document Type: Article

*Vernonia galamensis* is an annual herb whose seed oil contains high levels of an **epoxy** fatty acid, vernolic (cis-12,13- **epoxy** cis-9- **octadecenoic** ) acid. The seed also contains lipase activity in the dormant state. A lipase was purified from the seed and its substrate specificity studied in isooctane. The lipase shows pronounced selectivity for the native triacylglycerol, trivernolin. The rate of hydrolysis of triolein, the corresponding non **epoxy** triacylglycerol, is only 3% of that of trivernolin. In the acidolysis of tricaprylin using a mixture of fatty acids, the *Vernonia* lipase also showed selectivity for vernolic acid. Michaelis-Menten kinetics of the hydrolysis of triacylglycerols revealed that the observed high selectivity of the *Vernonia* lipase for trivernolin was mainly due to a higher Vmax for trivernolin. The Vmax value for the hydrolysis of trivernolin was 5 times higher than that for triolein. This novel substrate specificity is an adaptation by the seed lipase to the triacylglycerols of the seed oil that contain up to 80% vernolic acid.

Section Headings: F600 **PLANT** PHYSIOLOGY AND BIOCHEMISTRY

3/5/18 (Item 5 from file: 10)

DIALOG(R)File 10:AGRICOLA

(c) format only 2005 The Dialog Corporation. All rts. reserv.

3558937 20551335 Holding Library: AGL

**Specificity of *Carica papaya* latex as biocatalyst in the esterification of fatty acids with 1-butanol**

Mukherjee, K.D. Kiewitt, I.

Federal Center for Cereal, Potato and Lipid Research, Munster, Germany.

Washington, D.C. : American Chemical Society.

Journal of agricultural and food chemistry. July 1996. v. 44 (7) p.

1948-1952.

ISSN: 0021-8561 CODEN: JAFCAU

DNAL CALL NO: 381 J8223

Language: English

Includes references

Place of Publication: District of Columbia

Subfile: IND; OTHER US (NOT EXP STN, EXT, USDA; SINCE 12/76);

Document Type: Article

Papaya (*Carica papaya*) latex, reportedly known to have good lipolytic activity, has been evaluated as biocatalyst in the esterification of various fatty acids with 1-butanol in the presence of myristic acid as the reference standard. *C. papaya* latex strongly discriminates against fatty acids having a cis-4 unsaturation, e.g. all-cis-4,7,10,13,16,19-docosahexaenoic acid, cis-6 unsaturation, e.g. petroselinic (cis-6- **octadecenoic**), gamma-linolenic (all-cis-6,9,12-octadecatrienoic), and stearidonic (all-cis-6,9,12,15-octadecatetraenoic) acids, and cis-8 unsaturation, e.g. dihomogamma-linolenic (all-cis-8,11,14-eicosatrienoic) acid. Fatty acids having cis-5 unsaturation, e.g. all-cis-5,8,11,14,17-eicosapentaenoic acid, and those having a cis-9 unsaturation, e.g. oleic (cis-9- **octadecenoic**) and alpha-linolenic (all-cis-9,12,15-octadecatrienoic) acids are very well accepted as substrates. Fatty acids having hydroxy groups, e.g. ricinoleic (12-hydroxy-cis-9- **octadecenoic**) acid and 12-hydroxystearic acid, epoxy groups, e.g. trans-9,10-epoxystearic acid, and cyclopentenyl groups, e.g. hydrocarpic [(11-(2'-cyclopentenyl)undecanoic] acid and chaulmoogric [13-(2'-cyclopentenyl)tridecanoic] acid are also well accepted as substrates. The observed substrate specificities are similar to those reported for lipase preparations from microorganisms, animals, and plants.

DESCRIPTORS: carica papaya; latex; triacylglycerol lipase; esterification; butanol; substrates; fatty acids;

Identifiers: enzymatic esterification; substrate specificity; fatty acid specificity

Section Headings: F600 **PLANT** PHYSIOLOGY AND BIOCHEMISTRY

3/5/19 (Item 6 from file: 10)

DIALOG(R)File 10:AGRICOLA

(c) format only 2005 The Dialog Corporation. All rts. reserv.

3541587 20537520 Holding Library: AGL

**Peroxygenase-catalyzed fatty acid epoxidation in cereal seeds. Sequential oxidation of linoleic acid into 9(S),12(S),13(S)-trihydroxy-10(E)-octadecenoic acid**

Hamberg, M. Hamberg, G.

Karolinska Institutet, Stockholm, Sweden.

Rockville, MD : American Society of Plant Physiologists, 1926-  
Plant physiology. Mar 1996. v. 110 (3) p. 807-815.

ISSN: 0032-0889 CODEN: PLPHAY

DNAL CALL NO: 450 P692

Language: English

Includes references

Place of Publication: Maryland

Subfile: IND; OTHER US (NOT EXP STN, EXT, USDA; SINCE 12/76);

Document Type: Article

Peroxygenase-catalyzed epoxidation of oleic acid in preparations of cereal seeds was investigated. The 105,000g particle fraction of oat (*Avena sativa*) seed homogenate showed high peroxygenase activity, i.e. 3034 +/- 288 and 2441 +/- 168 nmol (10 min)<sup>-1</sup> mg<sup>-1</sup> protein in two cultivars, whereas the corresponding fraction obtained from barley (*Hordeum vulgare* and *Hordeum distichum*), rye (*Secale cereale*), and wheat (*Triticum aestivum*)

showed only weak activity, i.e. 13 to 138 nmol (10 min)<sup>-1</sup> mg<sup>-1</sup> protein. In subcellular fractions of oat seed homogenate, peroxygenase specific activity was highest in the 105,000g particle fraction, whereas lipxygenase activity was more evenly distributed and highest in the 105,000g supernatant fraction. Incubation of [1-<sup>14</sup>C]linoleic acid with the 105,000g supernatant of oat seed homogenate led to the formation of several metabolites, i.e. in order of decreasing abundance, 9(S)hydroxy-10(E)12(Z)-octadecadienoic acid, 9(S),12(S),13(S)-trihydroxy-10(E)- **octadecenoic** acid, cis-9,10- **epoxy** -12(Z)- **octadecenoic** acid [mainly the 9(R),10(S) enantiomer], cis-12,13- **epoxy** -9(Z)- **octadecenoic** acid [mainly the 12(R),13(S) enantiomer], threo-12,13-dihydroxy-9(Z)- **octadecenoic** acid, and 12(R),13(S)- **epoxy** -9(S)-hydroxy-10 (E)- **octadecenoic** acid. Incubation of linoleic acid with the 105,000g particle fraction gave a similar, but not identical, pattern of metabolites. Conversion of linoleic acid into 9(S),12(S),13(S)-trihydroxy-10(E)- **octadecenoic** acid, a naturally occurring oxylipin with antifungal properties, took place by a pathway involving sequential catalysis by lipxygenase, peroxygenase, and epoxide hydrolase.

DESCRIPTORS: avena sativa; hordeum vulgare; secale cereale; triticum aestivum; seeds; oxygenases; lipxygenase; epoxide hydrolase; catalytic activity; quantitative analysis; fatty acids; epoxides; oxidation; linoleic acid; stearic acid; biochemical pathways; metabolites; cultivars;

Section Headings: F600 **PLANT** PHYSIOLOGY AND BIOCHEMISTRY; F200 **PLANT** BREEDING

3/5/20 (Item 7 from file: 10)

DIALOG(R)File 10:AGRICOLA

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3366390 20392011 Holding Library: AGL

**Regio- and stereoselectivity of cytochrome P-450 and peroxygenase-dependent formation of cis-12,13- epoxy -9(Z)- octadecenoic acid (vernolic acid) in Euphorbia lagascae**

Blee, E. Stahl, U.; Schuber, F.; Stymne, S.

Orlando, Fla. : Academic Press.

Biochemical and biophysical research communications. Dec 15, 1993. v. 197 (2) p. 778-784.

ISSN: 0006-291X CODEN: BBRCA9

DNAL CALL NO: 442.8 B5236

Language: English

Includes references

Place of Publication: Florida

Subfile: IND; OTHER US (NOT EXP STN, EXT, USDA; SINCE 12/76);

Document Type: Article

Two oxygenases associated with microsomes prepared from Euphorbia lagascae developing seeds were found to convert linoleic acid into cis-12,13- **epoxy** -9(Z)- octadecenoic acid (vernolate): a cytochrome P-450 and a peroxygenase. The cytochrome P-450 dependent epoxidation is characterized by a remarkable regio- and enantioselectivity, i.e. only the 12(S), 13(R)-enantiomer is formed in the endosperm. In germinating seeds, peroxygenase was active but no cytochrome P-450 epoxidase could be detected. Moreover, because of the very high enantioselectivity of the fatty acid epoxide hydrolase, which is also found in these tissues and which preferentially hydrates the 12(R), 13(S)-epoxide enantiomer, 12(S),13(R)- **epoxy** -9(Z)- **octadecenoic** acid is the only isomer which can accumulate in E. lagascae.

DESCRIPTORS: euphorbia; seeds; microsomes; cytochrome p-450; oxygenases;



oleic acid; linoleic acid; oxidation; epoxide hydrolase; enzyme activity; stereochemistry; seed germination;

Identifiers: euphorbia lagascae; **epoxy** fatty acids; epoxidation

Section Headings: F600 **PLANT** PHYSIOLOGY AND BIOCHEMISTRY

3/5/21 (Item 8 from file: 10)

DIALOG(R)File 10:AGRICOLA

(c) format only 2005 The Dialog Corporation. All rts. reserv.

3269813 93018157 Holding Library: AGL

On the specificity of a fatty acid epoxygenase in broad bean (*Vicia faba* L.)

Hamberg, M. Fahlstadius, P.

Karolinska Institutet, Stockholm, Sweden

Rockville, Md. : American Society of Plant Physiologists.

Plant physiology. July 1992. v. 99 (3) p. 987-995.

ISSN: 0032-0889 CODEN: PLPHA

DNAL CALL NO: 450 P692

Language: English

Includes references.

Subfile: OTHER US (NOT EXP STN, EXT, USDA; SINCE 12/76);

Document Type: Article

Seeds of broad bean (*Vicia faba* L.) contain a hydroperoxide-dependent fatty acid epoxygenase. Hydrogen peroxide served as an effective oxygen donor in the epoxygenase reaction. Fifteen unsaturated fatty acids were incubated with *V. faba* epoxygenase in the presence of hydrogen peroxide and the **epoxy** fatty acids produced were identified. Examination of the substrate specificity of the epoxygenase using a series of monounsaturated fatty acids demonstrated that (Z)-fatty acids were rapidly epoxidized into the corresponding cis- **epoxy** acids, whereas (E)-fatty acids were converted into their trans-epoxides at a very slow rate. In the series of (Z)-monoenoic acids, the double bond position as well as the chain length influenced the rate of epoxidation. The best substrates were found to be palmitoleic, oleic, and myristoleic acids. Steric analysis showed that most of the **epoxy** acids produced from monounsaturated fatty acids as well as from linoleic and alpha-linolenic acids had mainly the (R),(S) configuration. Exceptions were C(18) acids having the epoxide group located at C-12/13, in which cases the (S),(R) enantiomers dominated. 13(S)-Hydroxy-9(Z),11(E)-octadecadienoic acid incubated with epoxygenase afforded the **epoxy** alcohol 9(S),10(R)- **epoxy** -13(S)-hydroxy-11(E)-**octadecenoic** acid as the major product. Smaller amounts of the diastereomeric **epoxy** alcohol 9(R),10(S)- **epoxy** -13(S)-hydroxy-11(E)-**octadecenoic** acid as well as the alpha,beta- **epoxy** alcohol 11(R),12(R)- **epoxy** -13(S)-hydroxy-9(Z)- **octadecenoic** acid were also obtained. The soluble fraction of homogenate of *V. faba* seeds contained an epoxide hydrolase activity that catalyzed the conversion of cis-9,10-epoxyoctadecanoic acid into threo-9,10-dihydroxyoctadecanoic acid.

DESCRIPTORS: vicia faba; seeds; fatty acids; enzymes; enzyme activity; substrates; stereochemistry;

Section Headings: F600 **PLANT** PHYSIOLOGY AND BIOCHEMISTRY

3/5/22 (Item 9 from file: 10)

DIALOG(R)File 10:AGRICOLA

(c) format only 2005 The Dialog Corporation. All rts. reserv.

3060981 91010622 Holding Library: AGL



**Hydroperoxide-dependent epoxidation of unsaturated fatty acids in the broad bean (*Vicia faba* L.)**

Hamberg, M. Hamberg, G.

Karolinska Institutet, Stockholm, Sweden

Duluth, Minn. : Academic Press.

Archives of biochemistry and biophysics. Dec 1990. v. 283 (2) p. 409-416.

ISSN: 0003-9861 CODEN: ABBIA

DNAL CALL NO: 381 AR2

Language: English

Includes references.

Subfile: OTHER US (NOT EXP STN, EXT, USDA; SINCE 12/76);

Document Type: Article

Incubation of linoleic acid with the 105,000g particle fraction of the homogenate of the broad bean (*Vicia faba* L.) led to the formation of the following products: 13(S)-hydroxy-9 (Z),11(E)-octadecadienoic acid, 9,10-**epoxy** -12 (Z)- **octadecenoic** acid (9(R),10(S)/9(S)/10(R), 80/20), 12,13-**epoxy** -9(Z)- **octadecenoic** acid (12(S),13(R)/12(R)/13(S), 64/36), and 9,10- **epoxy** -13(S)-hydroxy-11(E)- **octadecenoic** acid (9(S),10(R)/9(R),10(S), 91/9). Oleic acid incubated with the enzyme preparation in the presence of 13(S)-hydroperoxy-9(Z),11(E)-octadecadienoic acid or cumene hydroperoxide was converted into 9, 10-epoxyoctadecanoic acid (9(R),10(S)/9(S),10(R), 79/21). Two enzyme activities were involved in the formation of the products, an omega 6-lipoxygenase and a hydroperoxide-dependent epoxygenase. The lipoxygenase, but not the epoxygenase, was inhibited by low concentrations of 5,8,11,14-eicosatetraynoic acid and nordihydroguaiaretic acid. In contrast, the epoxygenase, but not the lipoxygenase, was readily inactivated in the presence of 13(S)-hydroperoxy-9(Z),11(E)-octadecadienoic acid. Studies with 1802-labeled 13(S)-hydroperoxy-9 (Z),11(E)-octadecadienoic acid showed that the epoxide oxygens of 9,10-epoxyoctadecanoic acid and of 9,10- **epoxy** -13 (S)-hydroxy-11(E)- **octadecenoic** acid were derived from hydroperoxide and not from molecular oxygen.

DESCRIPTORS: *vicia faba*; lipoxygenase; linoleic acid; oxidation; hydrogen peroxide;

Identifiers: epoxygenase; enzyme mechanisms

Section Headings: F600 **PLANT** PHYSIOLOGY AND BIOCHEMISTRY

?

FILE 'BIOSIS' ENTERED AT 11:02:59 ON 12 JUL 2005  
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FILE 'AGRICOLA' ENTERED AT 11:02:59 ON 12 JUL 2005

=> s epoxygenase  
L1 533 EPOXYGENASE

=> s 11 and plant  
L2 13 L1 AND PLANT

=> d 1

L2 ANSWER 1 OF 13 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
AN 2004:347371 BIOSIS  
DN PREV200400349260  
TI Properties of two multifunctional **plant** fatty acid  
acetylenase/desaturase enzymes.  
AU Carlsson, Anders S. [Reprint Author]; Thomaeus, Stefan; Hamberg, Mats;  
Stymne, Sten  
CS Dept Crop Sci, Swedish Univ Agr Sci, POB 44, S-23053, Alnarp, Sweden  
anders.carlsson@vv.slu.se  
SO European Journal of Biochemistry, (July 2004) Vol. 271, No. 14, pp.  
2991-2997. print.  
ISSN: 0014-2956 (ISSN print).  
DT Article  
LA English  
ED Entered STN: 18 Aug 2004  
Last Updated on STN: 18 Aug 2004

=> d 2

L2 ANSWER 2 OF 13 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
AN 2003:110604 BIOSIS  
DN PREV200300110604  
TI Molecular analysis of a bifunctional fatty acid conjugase/desaturase from  
tung. Implications for the evolution of **plant** fatty acid  
diversity.  
AU Dyer, John M. [Reprint Author]; Chapital, Dorselyn C.; Kuan, Jui-Chang W.;  
Mullen, Robert T.; Turner, Charlotta; McKeon, Thomas A.; Pepperman, Armand  
B.  
CS Southern Regional Research Center, United States Department of  
Agriculture-Agricultural Research Service, 1100 Robert E. Lee Boulevard,  
New Orleans, LA, 70124, USA  
jdyer@nola.srrc.usda.gov  
SO Plant Physiology (Rockville), (December 2002) Vol. 130, No. 4, pp.  
2027-2038. print.  
ISSN: 0032-0889 (ISSN print).  
DT Article  
LA English  
ED Entered STN: 26 Feb 2003  
Last Updated on STN: 26 Feb 2003

=> rd L2  
RD IS NOT A RECOGNIZED COMMAND  
The previous command name entered was not recognized by the system.  
For a list of commands available to you in the current file, enter  
"HELP COMMANDS" at an arrow prompt (=>).

=> d 3-13

L2 ANSWER 3 OF 13 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
 AN 2003:41259 BIOSIS  
 DN PREV200300041259  
 TI Expression of epoxy fatty acid synthesis genes.  
 AU Hatanaka, Tomoko [Reprint Author]; Hildebrand, David F. [Reprint Author]  
 CS Department of Agronomy, University of Kentucky, Lexington, KY, USA  
 thata2@pop.uky.edu  
 SO Plant Biology (Rockville), (2001) Vol. 2001, pp. 108-109. print.  
 Meeting Info.: Joint Annual Meetings of the American Society of Plant  
 Biologists and the Canadian Society of Plant Physiologists. Providence,  
 Rhode Island, USA. July 21-25, 2001. American Society of Plant Biologists;  
 Canadian Society of Plant Physiologists.  
 DT Conference; (Meeting)  
 Conference; Abstract; (Meeting Abstract)  
 LA English  
 ED Entered STN: 15 Jan 2003  
 Last Updated on STN: 15 Jan 2003

L2 ANSWER 4 OF 13 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
 AN 2002:113981 BIOSIS  
 DN PREV200200113981  
 TI **Plant** fatty acid **epoxygenase** genes and uses therefor.  
 AU Green, Allan [Inventor, Reprint author]; Singh, Surinder [Inventor];  
 Lenman, Marit [Inventor]; Stymne, Sten [Inventor]  
 CS Barton, Australia  
 ASSIGNEE: BASF Plant Science GmbH, Ludwigshafen, Germany; Commonwealth  
 Scientific and Industrial Research Organisation, Campbell, Australia  
 PI US 6329518 20011211  
 SO Official Gazette of the United States Patent and Trademark Office Patents,  
 (Dec. 11, 2001) Vol. 1253, No. 2. [http://www.uspto.gov/web/menu/patdata.ht](http://www.uspto.gov/web/menu/patdata.html)  
 ml. e-file.  
 CODEN: OGUPE7. ISSN: 0098-1133.  
 DT Patent  
 LA English  
 ED Entered STN: 30 Jan 2002  
 Last Updated on STN: 26 Feb 2002

L2 ANSWER 5 OF 13 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
 AN 2001:546278 BIOSIS  
 DN PREV200100546278  
 TI Distribution of fatty acids in polar and neutral lipids during seed  
 development in Arabidopsis thaliana genetically engineered to produce  
 acetylenic, epoxy and hydroxy fatty acids.  
 AU Thomaus, Stefan [Reprint author]; Carlsson, Anders S.; Stymne, Sten  
 CS Department of Crop Science, Swedish University of Agricultural Science,  
 Vaxtskyddsvagen 1, 23053, Alnarp, Sweden  
 stefan.thomaus@vv.slu.se  
 SO Plant Science (Shannon), (October, 2001) Vol. 161, No. 5, pp. 997-1003.  
 print.  
 CODEN: PLSCE4. ISSN: 0168-9452.  
 DT Article  
 LA English  
 ED Entered STN: 21 Nov 2001  
 Last Updated on STN: 25 Feb 2002

L2 ANSWER 6 OF 13 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
 AN 2001:262542 BIOSIS  
 DN PREV200100262542  
 TI Paclitaxel metabolism by clinically relevant cell lines and its effects on  
 cell metabolism in vitro.  
 AU Roberts, Susan Celia [Reprint author]; Roberts, Louis Anthony [Reprint  
 author]; McAuliffe, Gretchen [Reprint author]

CS University of Massachusetts, 159 Goessmann Laboratory, Amherst, MA, 01003, USA

SO FASEB Journal, (March 8, 2001) Vol. 15, No. 5, pp. A919. print.  
Meeting Info.: Annual Meeting of the Federation of American Societies for Experimental Biology on Experimental Biology 2001. Orlando, Florida, USA. March 31-April 04, 2001.  
CODEN: FAJOEC. ISSN: 0892-6638.

DT Conference; (Meeting)  
Conference; Abstract; (Meeting Abstract)

LA English

ED Entered STN: 30 May 2001  
Last Updated on STN: 19 Feb 2002

L2 ANSWER 7 OF 13 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
AN 2001:198654 BIOSIS  
DN PREV200100198654  
TI Inhibition of polyunsaturated fatty acid accumulation in plants expressing a fatty acid **epoxygenase**.  
AU Singh, S. [Reprint author]; Thomaesus, S.; Lee, M.; Green, A.; Stymne, S.  
CS CSIRO Plant Industry, Canberra, ACT, Australia  
surinder.singh@pi.csiro.au  
SO Biochemical Society Transactions, (December, 2000) Vol. 28, No. 6, pp. 940-942. print.  
CODEN: BCSTB5. ISSN: 0300-5127.

DT Article

LA English

ED Entered STN: 25 Apr 2001  
Last Updated on STN: 18 Feb 2002

L2 ANSWER 8 OF 13 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
AN 1996:529818 BIOSIS  
DN PREV199699252174  
TI Oxygenation of (3Z)-alkenal to (2E)-4-hydroxy-2-alkenal in soybean seed (Glycine max L.).  
AU Takamura, Hitoshi; Gardner, Harold W. [Reprint author]  
CS Natl. Cent. Agric. Utilization Res., ARS, USDA, 1815 N. University St., Peoria, IL 61604, USA  
SO Biochimica et Biophysica Acta, (1996) Vol. 1303, No. 2, pp. 83-91.  
CODEN: BBACAQ. ISSN: 0006-3002.

DT Article

LA English

ED Entered STN: 22 Nov 1996  
Last Updated on STN: 23 Jan 1997

L2 ANSWER 9 OF 13 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
AN 1989:277783 BIOSIS  
DN PREV198937002780; BR37:2780  
TI EPOXIDATION OF CIS AND TRANS DELTA-9-UNSATURATED LAURIC ACIDS BY A CYTOCHROME P-450-DEPENDENT SYSTEM FROM HIGHER **PLANT** MICROSOMES.  
AU SALAUN J-P [Reprint author]; WEISSBART D; DURST F; PFLIEGER P; MIOSKOWSKI C  
CS LABORATOIRE D'ENZYMOLOGIE CELLULAIRE ET MOLECULAIRE, UNIVERSITE LOUIS PASTEUR-CNRS UA 1182, 28, RUE GOETHE, F-67083 STRASBOURG CEDEX, FRANCE  
SO Febs Letters, (1989) Vol. 246, No. 1-2, pp. 120-126.  
CODEN: FEBLAL. ISSN: 0014-5793.

DT Article

FS BR

LA ENGLISH

ED Entered STN: 8 Jun 1989  
Last Updated on STN: 27 Jul 1989

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AN 2003:37713 AGRICOLA

DN IND23329911

TI Molecular analysis of a bifunctional fatty acid conjugase/desaturase from tung. Implications for the evolution of **plant** fatty acid diversity.

AU Dyer, J.M.; Chapital, D.C.; Kuan, J.C.W.; Mullen, R.T.; Turner, C.; McKeon, T.A.; Pepperman, A.B.

AV DNAL (450 P692)

SO Plant physiology, Dec 2002. Vol. 130, No. 4. p. 2027-2038

CODEN: PLPHAY; ISSN: 0032-0889

NTE Includes references

CY Maryland; United States

DT Article; Conference

FS Other US

LA English

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AN 2001:57453 AGRICOLA

DN IND23216261

TI Transgenic expression of a delta12-**epoxygenase** gene in Arabidopsis seeds inhibits accumulation of linoleic acid.

AU Singh, S.; Thomaus, S.; Lee, M.; Stymne, S.; Green, A.

AV DNAL (450 P693)

SO Planta, Apr 2001. Vol. 212, No. 5/6. p. 872-879

Publisher: Berlin ; New York : Springer-Verlag, 1925-

CODEN: PLANAB; ISSN: 0032-0935

NTE Includes references

CY Germany

DT Article

FS Non-U.S. Imprint other than FAO

LA English

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AN 2001:34038 AGRICOLA

DN IND22437987

TI Inhibition of polyunsaturated fatty acid accumulation in plants expressing a fatty acid **epoxygenase**.

AU Singh, S.; Thomaus, S.; Lee, M.; Green, A.; Stymne, S.

AV DNAL (QD415.A1B58)

SO Transactions, Dec 2000. Vol. 28, No. pt.6. p. 940-942

Publisher: London : Portland Press.

CODEN: BCSTB5; ISSN: 0300-5127

NTE Paper presented at the "14th International Symposium on **Plant** Lipids," Cardiff University, Wales, U.K.

Includes references

CY England; United Kingdom

DT Article

FS Non-U.S. Imprint other than FAO

LA English

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AN 97:17876 AGRICOLA

DN IND20550816  
TI Oxygenation of (3Z)-alkenal to (2E)-4-hydroxy-2-alkenal in soybean seed  
(Glycine max L.).  
AU Takamura, H.; Gardner, H.W.  
CS Nara Women's University, Nara, Japan.  
SO Biochimica et biophysica acta = International journal of biochemistry and  
biophysics, Sept 27, 1996. Vol. 1303, No. 2. p. 83-91  
Publisher: Amsterdam : Elsevier Science B.V.  
CODEN: BBACAQ; ISSN: 0006-3002  
NTE Includes references  
CY Netherlands  
DT Article  
FS Non-U.S. Imprint other than FAO  
LA English

=> s epoxy and octadecenoic  
L3 110 EPOXY AND OCTADECENOIC

=> s L3 and plant  
L4 14 L3 AND PLANT

=> d 1-14

L4 ANSWER 1 OF 14 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
AN 2001:198654 BIOSIS  
DN PREV200100198654  
TI Inhibition of polyunsaturated fatty acid accumulation in plants expressing  
a fatty acid epoxxygenase.  
AU Singh, S. [Reprint author]; Thomaues, S.; Lee, M.; Green, A.; Stymne, S.  
CS CSIRO Plant Industry, Canberra, ACT, Australia  
surinder.singh@pi.csiro.au  
SO Biochemical Society Transactions, (December, 2000) Vol. 28, No. 6, pp.  
940-942. print.  
CODEN: BCSTB5. ISSN: 0300-5127.  
DT Article  
LA English  
ED Entered STN: 25 Apr 2001  
Last Updated on STN: 18 Feb 2002

L4 ANSWER 2 OF 14 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
AN 2000:297274 BIOSIS  
DN PREV200000297274  
TI New cyclopentenone fatty acids formed from linoleic and linolenic acids in  
potato.  
AU Hamberg, Mats [Reprint author]  
CS Department of Medical Biochemistry and Biophysics, Division of  
Physiological Chemistry II, Karolinska Institutet, S-171 77, Stockholm,  
Sweden  
SO Lipids, (April, 2000) Vol. 35, No. 4, pp. 353-363. print.  
CODEN: LPDSAP. ISSN: 0024-4201.  
DT Article  
LA English  
ED Entered STN: 12 Jul 2000  
Last Updated on STN: 7 Jan 2002

L4 ANSWER 3 OF 14 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
AN 1998:276953 BIOSIS  
DN PREV199800276953  
TI Identification of non-heme diiron proteins that catalyze triple bond and  
**epoxy** group formation.  
AU Lee, Michael; Lenman, Marit; Banas, Antoni; Bafor, Maureen; Singh,  
Surinder; Schweizer, Michael; Nilsson, Ralf; Liljenberg, Conny; Dahlqvist,

Anders; Gummeson, Per-Olov; Sjodahl, Staffan; Green, Allan; Stymne, Sten  
[Reprint author]  
CS Dep. Plant Breed. Res., Swedish Univ. Agric. Sci., S-268 31 Svalov, Sweden  
SO Science (Washington D C), (May 8, 1998) Vol. 280, No. 5365, pp. 915-918.  
print.  
CODEN: SCIEAS. ISSN: 0036-8075.

DT Article  
LA English  
ED Entered STN: 24 Jun 1998  
Last Updated on STN: 13 Aug 1998

L4 ANSWER 4 OF 14 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
AN 1996:225916 BIOSIS  
DN PREV199698782045  
TI Peroxygenase-catalyzed fatty acid epoxidation in cereal seeds: Sequential  
oxidation of linoleic acid into 9(S),12(S),13(S)-trihydroxy-10(E)-  
**octadecenoic** acid.  
AU Hamberg, Mats [Reprint author]; Hamberg, Gunvor  
CS Dep. Med. Biochemistry Biophysics, Div. Physiol. Chem. II, Karolinska  
Inst., S-171 77 Stockholm, Sweden  
SO Plant Physiology (Rockville), (1996) Vol. 110, No. 3, pp. 807-815.  
CODEN: PLPHAY. ISSN: 0032-0889.

DT Article  
LA English  
ED Entered STN: 8 May 1996  
Last Updated on STN: 8 May 1996

L4 ANSWER 5 OF 14 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
AN 1995:415819 BIOSIS  
DN PREV199598430119  
TI Fatty acid selectivity of a lipase purified from Vernonia galamensis seed.  
AU Ncube, Ignatious; Gitlesen, Thomas; Adlercreutz, Patrick [Reprint author];  
Read, John S.; Mattiasson, Bo  
CS Dep. Biotechnol., Chem. Cent., Lund Univ., PO Box 124, S-221 00 Lund,  
Sweden  
SO Biochimica et Biophysica Acta, (1995) Vol. 1257, No. 2, pp. 149-156.  
CODEN: BBACAQ. ISSN: 0006-3002.

DT Article  
LA English  
ED Entered STN: 27 Sep 1995  
Last Updated on STN: 1 Nov 1995

L4 ANSWER 6 OF 14 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
AN 1993:303208 BIOSIS  
DN PREV199396021433  
TI High-performance liquid chromatography of the triacylglycerols of Vernonia  
galamensis and Crepis alpina seed oils.  
AU Neff, W. E. [Reprint author]; Adlof, R. O.; Konishi, H.; Weisleder, D.  
CS NCAUR, 1815 N. University St., Peoria, IL 61604, USA  
SO Journal of the American Oil Chemists' Society, (1993) Vol. 70, No. 5, pp.  
449-455.  
CODEN: JAOCA7. ISSN: 0003-021X.

DT Article  
LA English  
ED Entered STN: 23 Jun 1993  
Last Updated on STN: 23 Jun 1993

L4 ANSWER 7 OF 14 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
AN 1993:169124 BIOSIS  
DN PREV199395090174  
TI Enzymatic synthesis and spectroscopic characterization of  
1,3-divernoloylglycerol from Vernonia galamensis seed oil.  
AU Ayorinde, Folahan O. [Reprint author]; Nwaonicha, Chukwuma P.; Parchment,



Voneil N.; Bryant, Kent A.; Hassan, Mahmoud; Clayton, Marcella T.  
CS Dep. Chem., Howard Univ., Washington, DC 20059, USA  
SO Journal of the American Oil Chemists' Society, (1993) Vol. 70, No. 2, pp.  
129-132.  
CODEN: JAOCA7. ISSN: 0003-021X.

DT Article  
LA English  
ED Entered STN: 31 Mar 1993  
Last Updated on STN: 1 Apr 1993

L4 ANSWER 8 OF 14 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
AN 1991:294733 BIOSIS  
DN PREV199192015748; BA92:15748  
TI PREPARATION OF DEUTERIUM-LABELLED METHYL LINOLEATE AND ITS GEOMETRIC  
ISOMERS FROM NATURAL SEED OILS.  
AU ADLOF R O [Reprint author]; RAKOFF H; EMKEN E A  
CS FOOD QUALITY SAFETY RES, NATL CENT AGRIC UTILIZATION RES, AGRIC RES SERV,  
US DEP AGRIC, 1815 N UNIVERSITY ST, PEORIA, ILL 61604, USA  
SO Journal of the American Oil Chemists' Society, (1991) Vol. 68, No. 5, pp.  
303-306.  
CODEN: JAOCA7. ISSN: 0003-021X.

DT Article  
FS BA  
LA ENGLISH  
ED Entered STN: 25 Jun 1991  
Last Updated on STN: 13 Aug 1991

L4 ANSWER 9 OF 14 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
AN 1991:89969 BIOSIS  
DN PREV199191048859; BA91:48859  
TI VERNONIA-GALAMENSIS A RICH SOURCE OF **EPOXY** ACID.  
AU AYORINDE F O [Reprint author]; BUTLER B D; CLAYTON M T  
CS DEP CHEM, HOWARD UNIV, WASHINGTON, DC 20059, USA  
SO Journal of the American Oil Chemists' Society, (1990) Vol. 67, No. 11, pp.  
844-845.  
CODEN: JAOCA7. ISSN: 0003-021X.

DT Article  
FS BA  
LA ENGLISH  
ED Entered STN: 11 Feb 1991  
Last Updated on STN: 11 Feb 1991

L4 ANSWER 10 OF 14 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on  
STN  
AN 1991:87296 BIOSIS  
DN PREV199191046186; BA91:46186  
TI MINOR COMPONENTS OF LESQUERELLA-FENDLERI SEED OIL.  
AU CHAUDHRY A [Reprint author]; KLEIMAN R; CARLSON K D  
CS US DEP AGRIC, AGRIC RES SERV, NORTHERN REGIONAL RES CENT, 1815 NORTH  
UNIVERSITY ST, PEORIA, ILL 61604, USA  
SO Journal of the American Oil Chemists' Society, (1990) Vol. 67, No. 11, pp.  
863-866.  
CODEN: JAOCA7. ISSN: 0003-021X.

DT Article  
FS BA  
LA ENGLISH  
ED Entered STN: 11 Feb 1991  
Last Updated on STN: 13 Apr 1991

L4 ANSWER 11 OF 14 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on  
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AN 1990:430761 BIOSIS  
DN PREV199090091562; BA90:91562

TI PILOT **PLANT** EXTRACTION OF OIL FROM VERNONIA-GALAMENSIS SEED.  
AU AYORINDE F O [Reprint author]; CARLSON K D; PAVLIK R P; MCVETY J  
CS US DEP AGRICULTURE, AGRICULTURE RESEARCH SERVICE, NORTHERN REGIONAL  
RESEARCH CENTER, 1815 NORTH UNIVERSITY STREET, PEORIA, ILL 61604, USA  
SO Journal of the American Oil Chemists' Society, (1990) Vol. 67, No. 8, pp.  
512-518.  
CODEN: JAOCA7. ISSN: 0003-021X.  
DT Article  
FS BA  
LA ENGLISH  
ED Entered STN: 22 Sep 1990  
Last Updated on STN: 23 Sep 1990

L4 ANSWER 12 OF 14 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on  
STN  
AN 1990:159619 BIOSIS  
DN PREV199089087037; BA89:87037  
TI ALLENE OXIDE CYCLASE A NEW ENZYME IN **PLANT** LIPID METABOLISM.  
AU HAMBERG M [Reprint author]; FAHLSTADIUS P  
CS DEP PHYSIOL CHEM, KAROLINSKA INST, BOX 60400, S-104 01 STOCKHOLM, SWED  
SO Archives of Biochemistry and Biophysics, (1990) Vol. 276, No. 2, pp.  
518-526.  
CODEN: ABBIA4. ISSN: 0003-9861.  
DT Article  
FS BA  
LA ENGLISH  
ED Entered STN: 27 Mar 1990  
Last Updated on STN: 27 Mar 1990

L4 ANSWER 13 OF 14 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on  
STN  
AN 1988:314507 BIOSIS  
DN PREV198886031545; BA86:31545  
TI DEVELOPMENT OF **PLANT** CUTICLES FINE STRUCTURE AND CUTIN  
COMPOSITION OF CLIVIA-MINIATRA REG. LEAVES.  
AU RIEDERER M [Reprint author]; SCHONHERR J  
CS INST BOTANIK MIKROBIOLOGIE, TECHNISCHE UNIV MUENCHEN, ARCISSTRASSE 21,  
D-8000 MUENCHEN 2, W GER  
SO Planta (Heidelberg), (1988) Vol. 174, No. 1, pp. 127-138.  
CODEN: PLANAB. ISSN: 0032-0935.  
DT Article  
FS BA  
LA ENGLISH  
ED Entered STN: 3 Jul 1988  
Last Updated on STN: 3 Jul 1988

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AN 2001:57453 AGRICOLA  
DN IND23216261  
TI Transgenic expression of a delta12-epoxygenase gene in Arabidopsis seeds  
inhibits accumulation of linoleic acid.  
AU Singh, S.; Thomaeus, S.; Lee, M.; Stymne, S.; Green, A.  
AV DNAL (450 P693)  
SO Planta, Apr 2001. Vol. 212, No. 5/6. p. 872-879  
Publisher: Berlin ; New York : Springer-Verlag, 1925-  
CODEN: PLANAB; ISSN: 0032-0935  
NTE Includes references  
CY Germany  
DT Article  
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LA English

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